

U.S.S.N. 09/364,847

Filed: July 30, 1999

AMENDMENT AND RESPONSE TO OFFICE ACTION

In the Claims

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1. (twice amended) A protein fusion having a formula selected from the group consisting of E1-L_n-E2 and E2-L_n-E1, wherein E1 and E2 catalyze are expressed as catalytically active enzymes which act on substrate in successive reactions in a polyhydroxyalkanoate biosynthetic pathway and are each selected from the group consisting of β -ketothiolases, acyl-CoA reductases, polyhydroxyalkanoate synthases, poly(3-hydroxybutyrate) synthases, phasins, enoyl-CoA hydratases, and beta-hydroxyacyl-ACP::coenzyme-A transferases, in which linker L_n is a peptide of n amino acids that link links the carboxyl terminus of E1 to the amino terminus of E2 or the carboxyl terminus of E2 to the amino terminus of E1 [, and wherein expression of the fusion protein is under the control of a single promoter resulting in expression of both catalytically active E1 and E2].

2. (previously amended) The fusion of claim 1 wherein E1 and E2 are selected from the group consisting of β -ketothiolase (phbA) and acyl-CoA reductase (phbB); phbB and phbA; PHA synthase (phaC) and phasin (phaP); phaP and phaC; phaC and beta-hydroxyacyl-ACP::coenzyme-A transferase (phbG); phbG and phaC; phaC and enoyl-CoA hydratases (phaJ); and phaJ and phaC.

3. (original) The fusion of claim 1 wherein n in the linker is between zero and 50 amino acids.

4. (previously amended) The fusion of claim 1 wherein the linker is comprised of glycine-serine.

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5. (original) The fusion of claim 1 expressed in a plant.
6. (previously amended) The fusion of claim 1 expressed in bacteria.
- 7-14 (previously canceled)